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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,599	11/24/2003	Satoshi Takezawa	117846	1008

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EXAMINER

NOTE, JANIS L

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,599

Applicant(s)

TAKEZAWA ET AL

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,3-11 and 13-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The examiner acknowledges the cancellation of claims 2 and 12, and the amendments to claims 1, 3, 4, 11, 13, and 14, set forth in the amendment filed on Apr. 21, 2005. Claims 1, 3-11, and 13-20 are pending.

The examiner notes that contrary to applicants' statement that claim 9 was amended in the amendment filed on Apr. 21, 2005, the amendment filed on Apr. 21, 2005, did not amend claim 9.

2. Claims 11 and 13-20 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election filed on Dec. 3, 2004, has been treated as an election **without** traverse.

3. The replacement drawing sheets filed on Apr. 21, 2005, are acceptable.

4. The objections to the drawings set forth in the office action mailed on Jan. 24, 2005, paragraphs 3 and 4, have been withdrawn in response to the replacement drawing sheets filed on Apr. 21, 2005, for Figs 6, 8, and 9.

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The rejection of claims 3 and 4 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Jan. 24, 2005, paragraph 6, has been withdrawn in response to the amendments filed on Apr. 21, 2005, to claims 3 and 4.

The rejections under 35 U.S.C. 103(a) of claims 1-10 over Japanese Patent 2003-21418 (JP'418), alone or combined with the other cited prior, set forth in the office action mailed on Jan. 24, 2005, paragraphs 10-13, have been withdrawn.

Applicants have perfected their claim to foreign priority for the subject matter recited in instant claims 1 and 3-10. The verified English-language translation of the priority document Japanese Patent Application 2002-345715 filed on Apr. 21, 2005, provides antecedent basis as set forth under 35 U.S.C. 112, first paragraph, for the subject matter recited in instant claims 1 and 3-10. Accordingly, JP'418 is no longer prior art with respect to the subject matter recited instant claims 1 and 3-10.

5. Claims 5 and 6 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the

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claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 5 recites "[a]n image forming toner according to claim 1, wherein the image forming toner is a one-component development toner." The phrase "is a one-component development toner" recited in claim 5, does not further limit the compositional requirements recited in instant claim 1, from which claim 5 depends. The phrase is merely a statement of intended use.

Claim 6 recites "[a]n image forming toner according to claim 1, wherein the image forming toner is a two-component development toner that is used in combination with a carrier." The phrase "is a two-component development toner that is used in combination with a carrier," recited in claim 6, does not further limit the compositional requirements recited in instant claim 1, from which claim 6 depends. The phrase is merely a statement of intended use.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 5-7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 10-301332

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(JP'332), as evidenced by applicants' admission at page 12, line 8, and Grant & Hackh's Chemical Dictionary, page 552; combined with Diamond, Handbook of Imaging Materials, page 169 (Diamond I). See the Japanese Patent Office (JPO) machine-assisted translation of JP'332 for cites.

JP'332 discloses a toner comprising a styrene-n-butylacrylate-acrylic acid binder resin, the colorant carbon black, and the releasing agent decaglyceryl decaurate. Translation, paragraphs 0100-0101, 0104, and 0109; and example 4 in paragraphs 0127-0129. (Note that the term "stearin" in the phrase "deca stearin acid decaglyceryl" (emphasis added) in paragraph 0109 appears to be a translation error in the machine-translated copy. The term should be "stearic acid." Stearin is identified as glycerol tristearate; it is not an acid. However, stearic acid is identified as octadecanoic acid. See Grant & Hackh's Chemical Dictionary, page 552.) Decaglyceryl decaurate is a polyglycerol ester compound where the fatty esters are stearate (C18). Decaglyceryl decaurate has a "polymerization degree" of 10 and an esterification degree of 75%. The polymerization degree of 10 is within the range of 9 to 30 recited in instant claim 1. The esterification degree was determined by dividing the number of esters (9) by the number of alcohols in decaglycerol (12). The esterification

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degree of 75% is within the range of 50% or higher recited in instant claim 1. JP'332 further discloses that the toner may be used as the toner in a "one component system" or as the toner in a "binary system," Translation, paragraphs 0092-0095. In other words, the JP'332 toner may be used as a one component developer or in a two-component developer that further comprises a carrier, which meets the limitations recited in instant claims 5 and 6. JP'332 also teaches that the binder resin may equally be a polyester binder resin as recited in instant claim 7.

Translation, paragraph 0024, line 11; paragraph 0103; and example 5 in paragraphs 0131-0133.

As discussed supra, the JP'332 toner comprises the colorant carbon black. JP'332 does not disclose that the colorant carbon black is used as a light absorbing material as recited in the instant claims. However, the instant specification at page 12, line 8, discloses that black pigments such as carbon black can be used as light absorbing materials as recited in instant claim 9. Thus, the JP'332 colorant carbon black meets the compositional limitation recited in instant claim 9. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

JP'332 does not exemplify a toner comprising a charge control agent as recited in instant claim 1. However, JP'332

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teaches that the toner may further comprise an "electrification control agent," i.e., a charge control agent. Translation, paragraph 0039, line 4; and paragraph 0044. JP'332 discloses the electrification control agent may be a quaternary ammonium salt complex or a "nigrosine system compound."

The use of positive or negative charge control agents is well known in the art. Diamond I discloses that it is known to add charge control additives to toners when blending the pigment into the polymer resin does not give an adequate charge level or rate of charging. Diamond I further discloses a number of known charge control agents, including nigrosine and metal complexes, that effectively give the toner a positive or negative charge. Thus, the Diamond I teachings apply to both negative and positive charging applications. Diamond I, page 169, section 4.2.3.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'332 and Diamond I, to add a charge control agent, such as nigrosine, to the toner particles disclosed in JP'332, because that person would have had a reasonable expectation of successfully obtaining chargeable toner particles having an adequate charge level and rate of charging.

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JP'332 does not disclose that its toner is used in flash fixation as recited in instant claim 9. However, the recitation "is used in flash fixation" is merely a recitation of intended use that does not distinguish the toner recited in the instant claims from the toner rendered obvious over the combined teachings of JP'332 and Diamond I. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963).

Instant claim 10 is written in product-by-process format. The esterification degree of 75% of decaglyceryl decaurate was not determined by ¹H-NMR measurement as recited in instant claim 10. However, as discussed supra, the JP'332 decaglyceryl decaurate meets the compositional limitations recited in instant claim 10 and has an esterification degree of 75%, wherein the 75% is within the numerical range recited in instant claim 10. Thus, it appears that the JP'332 decaglyceryl decaurate is the same or substantially the same as the polyglycerol fatty acid ester compound recited in the instant

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claim where the degree of esterification is determined by the process recited in instant claim 10. The burden is on applicants to prove otherwise. In re Marosi, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). MPEP 2113.

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'332, as evidenced by Grant & Hackh's Chemical Dictionary, page 582, combined with Diamond I, as applied to claim 1 above, further combined with additional teachings in JP'332. See the JPO translation of JP'332 for cites.

JP'332 combined with Diamond I renders obvious a toner as described in paragraph 7 above, which is incorporated herein by reference.

JP'332 does not disclose the amount of decaglyceryl decastearate present in the toner in example 4. However, JP'332 teaches that the releasing agent can be present in the toner in an amount of 0.5-50% by weight, preferably 1-40% by weight, more preferably 1-30% by weight, of the toner. Translation, paragraph 0036, lines 1-2. The lower limits, i.e., 0.5% by weight and 1% by weight, of the JP'332 ranges are within the ranges of 0.1 to 10% by weight and 1 to 5% by weight, based on

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the weight of the toner recited in instant claims 3 and 4, respectively. The JP'332 ranges also overlap the amount ranges recited in instant claims 3 and 4. According to JP'332, when the amount of the releasing agent is less than 0.5% by weight, "it becomes easy to produce the so-called offset by which this toner adheres to a fixation roll at the time of elevated-temperature fixation"; and when the amount is greater than 50% by weight, "a toner becomes weak, a toner particle becomes ground . . . by churning within a developing machine."

Translation, paragraph 0036, lines 2-4. Thus, it appears that the prior art recognizes that the amount of the releasing agent is a result-effective variable. The variation of a result-effective variable is presumably within the skill of the ordinary worker in the art.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'332, to adjust, through routine experimentation, the amount of the releasing agent decaglyceryl decastearate in the toner rendered obvious over the combined teachings of JP'332 and Diamond I, such that the amount is within the ranges recited in instant claims 3 and 4, because that person would have had a reasonable expectation of successfully obtaining a toner having sufficient anti-offset and sufficient mechanical durability.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'332 as evidenced by Grant & Hackh's Chemical Dictionary, page 582, combined with Diamond I as applied to claim 1 above, further combined with Diamond, Handbook of Imaging Materials, pages 168-169 (Diamond II).

JP'332 combined with Diamond I renders obvious a toner as described in paragraph 7 above, which is incorporated herein by reference.

As discussed in paragraph 7, JP'332 exemplifies a toner comprising the colorant carbon black. However, JP'332 teaches that its toner may comprise a coloring agent, and does not limit the type of coloring agent used. Translation, paragraph 0028. JP'332 exemplifies toners comprising a phthalocyanine pigment. Translation, paragraph 0105; and example 2 in paragraphs 0118-0121.

The use of color coloring agents, besides black coloring agents, is well known in the art. Diamond II discloses that the "use of pigments other than black are increasingly playing a role in xerography in two applications. The first is a color to be used in addition to black when there is a desire to highlight certain information. Typical colors used for this application are red, blue, green, and brown, made from either a single

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pigment of a blend of pigments. The other major application is in the creation of full color documents. Here the subtractive set of pigments, cyan, magenta, and yellow, is used."

Diamond II, page 168, lines 30-36. Diamond II discloses that copper phthalocyanine can be used for cyans and blues, azo pigments for yellows, and quinacridones or rhodamines for magentas and reds. Diamond II, page 169, lines 1-3.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'332 and Diamond II, to use a color colorant as taught by Diamond as the coloring agent in the toner rendered obvious over the combined teachings of JP'332 and Diamond I, because that person would have had a reasonable expectation of successfully obtaining a color toner that can be used in an electrophotographic highlighting process or in an electrophotographic process for forming a full color image.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to

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Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Jun. 28, 2005

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1700